BSI-350US1

Appln. No.: 10/616,267

Amendment Dated June 1, 2009

Reply to Office Action of March 3, 2009

<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

- 1 54 (Cancelled)
- 55. (Previously Presented) A stabilizer having a stent-underlying portion adapted to be disposed within an interior space defined by an inner periphery of a stent, the stent-underlying portion having a distal end adapted to be positioned adjacent a distal end of the stent, a proximal end adapted to be positioned adjacent a proximal end of the stent, and a length extending from the portion distal end to the portion proximal end, the stabilizer comprising a non-inflatable inner core and one or more members for engaging the stent inner periphery along the length of the stent-underlying portion, wherein the one or more members for engaging the stent inner periphery comprises one or more radial protuberances that protrude from the inner core and lie along the stent-underlying portion of the stabilizer evenly distributed along the length of the stent-underlying portion from the proximal end to the distal end of the stent-underlying portion, wherein the one or more radial protuberances comprise at least one or more rings about the inner core.
- 56. (Previously Presented) The stabilizer of claim 55, wherein the one or more radial protuberances are axially distributed along the stent-underlying portion of the stabilizer along the length of the stent.

57-60. (Cancelled)

- 61. (Previously Presented) The stabilizer of claim 55, wherein the plurality of radial protuberances are positioned peripherally about the stabilizer such that the stabilizer engages the inner periphery of the stent in a plurality of peripheral locations.
- (Previously Presented) The stabilizer of claim 55, wherein the radial protuberances are adapted to frictionally engage the stent inner periphery.

63-64. (Canceled)

65. (Currently Amended) A stabilizer having a stent-underlying portion adapted to be disposed within an interior space defined by an inner periphery of a stent, the stent-underlying portion having a distal end adapted to be positioned adjacent a distal end of the stent, a proximal end adapted to be positioned adjacent a proximal end stent, and a length extending from the portion distal end to the portion proximal end, the stabilizer comprising a non-inflatable inner core and one or more <u>rings extending radially outwardly from the inner core members-for</u> engaging the stent inner periphery along the length of the stent-

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underlying portion, wherein one or more members for engaging the stent inner periphery comprises an outer surface of the stabilizer adapted to frictionally engage the stent inner periphery along the length of the stent-underlying portion from the proximal end to the distal end of the stent-underlying portion without protruding through interstitial openings in the stent inner periphery when the stent is disposed over the stabilizer in a predeployed condition.

- 66. (Previously Presented) The stabilizer of claim 65, wherein the stabilizer outer surface comprises a higher coefficient of static friction than both a coefficient of static friction and a coefficient of dynamic friction of the sheath.
- 67. (Previously Presented) The stabilizer of claim 65, wherein the stabilizer outer surface comprises a continuous member that extends from the distal end to the proximal end of the stent in contact with the inner periphery of the stent.
- 68. (Previously Presented) The stabilizer of claim 65, wherein the stabilizer comprises an inner core and the outer surface comprises a covering over the inner core.
- 69. (Previously Presented) The stabilizer of claim 68, wherein the covering comprises a coating on the inner core.
- 70. (Previously Presented) The stabilizer of claim 68, wherein the covering comprises a sleeve affixed to the inner core.
- 71. (Previously Presented) The stabilizer of claim 68, wherein the stabilizer comprises a plurality of discrete rings of the covering affixed to the inner core and a plurality of uncovered portions of the inner core spaced between the rings.
 - 72. (Previously Presented) A stent delivery system comprising:
- a) a stent comprising a proximal end, a distal end, a length between the proximal end and the distal end, and an inner periphery that defines an interior space, the stent adapted to be radially compressed and loaded within the delivery system for introduction into the body lumen and to be expanded for deployment within the body lumen;
- b) a sheath overlying the compressed stent during introduction of the stent within the body lumen;
- c) a stabilizer having a stent-underlying portion adapted to be disposed within the interior space of the stent, the stabilizer comprising a non-inflatable inner core and one or more members, each of the one or more members comprising one or more radial protuberances that protrude from the inner core and distributed along the stent-underlying portion of the stabilizer along the length of the stent from the proximal end to the distal end of the stent, wherein the

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one or more radial protuberances comprise at least one or more rings about the inner core engage the stent inner periphery.

- 73. (Previously Presented) The stent delivery system of claim 72, wherein the stabilizer is adapted to hold the stent in a desired position when the sheath is moved relative to the stent.
- 74. (Previously Presented) The stent delivery system of claim 72 wherein the stabilizer is adapted to hold the stent in the desired position when the sheath is retracted to deploy the stent.
- 75. (Previously Presented) The stent delivery system of claim 72, wherein the stabilizer is adapted to hold the stent in the desired position when the sheath is advanced to recapture a partially-deployed stent.
- 76. (Previously Presented) The stent delivery system of claim 72, wherein the one or more radial protuberances are axially distributed along the stent-underlying portion from the distal end to the proximal end of the stent.
- 77. (Previously Presented) The stent delivery system of claim 76, wherein the stent comprises a framework having one or more areas of open space and at least one of the plurality of radial protuberances penetrates the open space.

78-80. (Cancelled).

- 81. (Currently Amended) A stabilizer having a stent-underlying portion adapted to be disposed within an interior space defined by an inner periphery of a stent, the stent-underlying portion having a distal end adapted to be positioned adjacent a distal end of the stent, a proximal end adapted to be positioned adjacent a proximal end of the stent, and a length extending from the portion distal end to the portion proximal end, the stabilizer comprising a non-inflatable inner core and one or more members for engaging the stent inner periphery that are evenly distributed along the length of the stent, wherein the one or more members for engaging the stent inner periphery comprises parts-ofrings extending radially outwardly from an outer surface of the stabilizer adapted to frictionally engage the stent inner periphery along the length of the stent-underlying portion from the proximal end to the distal end of the stent-underlying portion, without protruding through interstitial openings in the stent inner periphery.
- 82. (Withdrawn) A method of manufacturing a stabilizer having a stent-underlying portion adapted to be disposed within an interior space defined by an inner periphery of a stent, the stabilizer comprising an inner core and one or more protuberances that protrude from the

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inner core for engaging the stent inner periphery, the method comprising forming each protuberance via the steps of:

- a) providing a radially protruding ring around an entire periphery of an axial portion of the inner core:
 - b) removing a peripheral section of the ring, leaving the protuberance.
- 83. (Withdrawn) The method of claim 82, wherein step (b) comprises removing more than half of the ring.
- 84. (Withdrawn) The method of claim 82, comprising forming the one or more protuberances in a pattern of a broken ring or broken helix about the inner core.
- 85. (Previously Presented) A stabilizer for deployment of a stent in a distal location inside a body lumen from a proximal access location outside the body, the stabilizer having a stent-underlying portion adapted to be disposed within an interior space defined by an inner periphery of the stent, the stent-underlying portion having a distal end adapted to be positioned adjacent a distal end of the stent, a proximal end adapted to be positioned adjacent a proximal end of the stent, and a length extending from the portion proximal end to the portion distal end, the stabilizer comprising a non-inflatable inner core having a first diameter adapted to underlie the stent, a proximal shoulder not underlying the stent located adjacent the proximal end of the stent and having a second diameter, and at least one distal protuberance underlying the stent and protruding from the inner core for engaging the stent inner periphery at a distal end of the stent-underlying portion without protruding through interstitial openings in the stent inner periphery when the stent is disposed over the stabilizer in a predeployed condition.
- 86. (Previously Presented) The stabilizer of claim 85 further comprising a plurality of intermediate protuberances distributed between the proximal shoulder and the distal protuberance.
- 87. (Previously Presented) A stent delivery system for deployment of a stent in a distal location inside a body lumen from a proximal access location outside the body, the system comprising:
- a) a stent comprising a proximal end, a distal end, and an inner periphery that
 defines an interior space, the stent adapted to be radially compressed and loaded within the
 delivery system for introduction into the body lumen and to be expanded for deployment within
 the body lumen;
- b) a sheath overlying the compressed stent during introduction of the stent within the body lumen;

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- c) a stabilizer having a stent-underlying portion adapted to be disposed within the interior space of the stent, the stent-underlying portion having a distal end adapted to be positioned adjacent the distal end of the stent, a proximal end adapted to be positioned adjacent a proximal end of the stent, and a length extending from the portion proximal end to the portion distal end, the stabilizer further comprising a non-inflatable inner core having a first diameter underlying the stent, a proximal shoulder not underlying the stent located adjacent the proximal end of the stent and extending to a proximal end of the stabilizer, and having a second diameter greater than the first diameter, and at least one member underlying the stent and protruding from the inner core and engaging the stent inner periphery at the distal end of the stent without protruding through interstitial openings in the stent inner periphery.
- 88. (Previously Presented) The stent delivery system of claim 87, wherein the stabilizer further comprises a plurality of intermediate protuberances distributed between the proximal shoulder and the distal protuberance.
- 89. (Withdrawn) A method of manufacturing a stabilizer having a stent-underlying portion adapted to be disposed within an interior space defined by an inner periphery of a stent, the stabilizer comprising an inner core and one or more protuberances that protrude from the inner core for engaging the stent inner periphery, the method comprising forming each protuberance via the steps of:
 - a) compressing the stent;
 - b) inserting the compressed stent and the inner core inside an outer sheath; and
 - c) injection molding the one or more protuberances over the inner core.